



EAB

RESEARCH BRIEF

4+1 and 3+2 Programs

Program Creation, Implementation, and
Assessment

Business Affairs Forum

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1) Executive Overview

Key Observations

Deans lead the creation of 4+1 programs to stay competitive with peers and respond to student demand. Although the approval process is different at every institution, the deans of each college are responsible for identifying opportunities for 4+1 programs and leading implementation. Contacts cite peers' programs as a motivation to create 4+1 programs, and also seek to better prepare students for the workforce.

Administrators rarely create new curriculum for 4+1 programs. Program administrators typically require that students complete an average of 30 credit hours to obtain the master's degree, and students in 4+1 programs select these courses from existing graduate curriculum. Using existing resources (e.g., faculty, buildings, curricula) leads to few costs associated with program development; virtually no financial investments are necessary during program creation. However, program administrators may create new courses based on student feedback during exit interviews (e.g., faculty at **Institution A** created a grant writing course for the master's in professional writing program (MAPW) based on students' comments).

Undergraduate students apply during spring of their junior year or fall of their senior year to 4+1 programs, and all applications require personal statements and recommendation letters. At **Institution C**, advisors encourage students to apply their junior year so that they may begin taking classes toward the master's their senior year. Applications for 4+1 programs differ from undergraduate applications in that they require a personal statement that outlines their career objectives and rationale for wanting to attend the program in question. All profiled institutions also require letters of recommendation, and other materials that programs may require include GRE scores, writing samples, and a resume.

The total tuition of the 4+1 program is the tuition for undergraduate education in addition to tuition for the master's program (charged annually or per credit hour). Institutions do not charge a flat tuition for 4+1 programs. Financial aid is limited for graduate students, although students in 4+1 programs who receive Pell grants can apply them to their undergraduate studies. However, students in 4+1 programs are typically homogenous and reflect a higher socioeconomic status than the institution as whole due to the lack of financial aid at the graduate level. Although the MAPW program at **Institution A** does offer a significant scholarship to full-time students, the nature of the coursework attracts primarily native English speakers. Contacts at profiled institutions acknowledge that increasing the diversity of 4+1 programs remains an area for growth.

Program administrators use alumni surveys and student exit interviews to measure student success and program satisfaction levels. Contacts share that student feedback is primarily anecdotal; administrators send surveys to students immediately following graduation, five years after graduation, and 10 years after graduation to determine student career progression. Directors of 4+1 programs administer exit interviews at the end of program completion, during which students voice feedback and concerns. Administrators use these comments to create changes to 4+1 programs when necessary (e.g., at **Institution C** program directors streamlined the course registration process).

2) Program Development and Implementation

Program Creation and Leadership

At **Institution B** contacts indicate that 4+1 programs exist to serve students and generate additional revenue.

Deans Create 4+1 Programs to Prepare Students for the Workforce and Stay Competitive with Peers

Contacts at profiled institutions indicate that students enter 4+1 programs to obtain better employment opportunities (e.g., jobs that pay higher salaries, earlier entry into management roles). For example, the three 4+1 engineering programs at **Institution C** grew out of student needs in conjunction with industry expectations and standards.

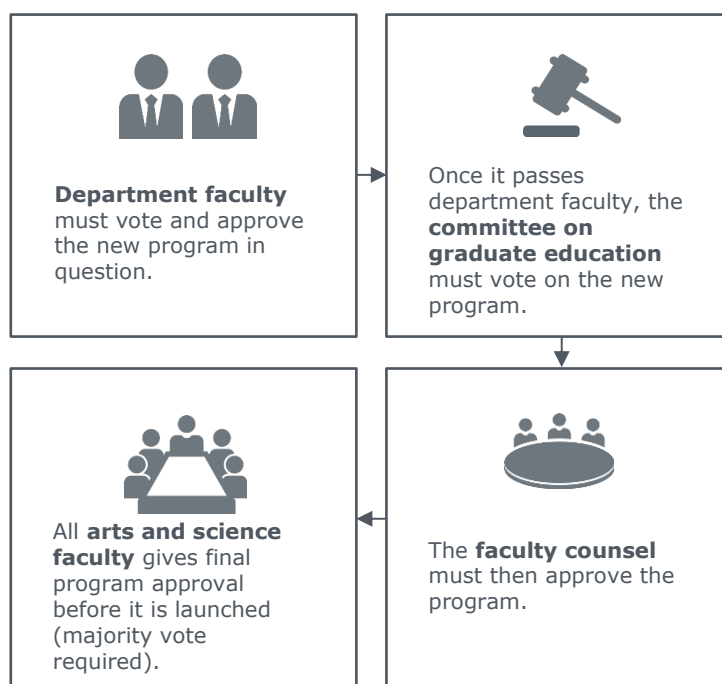
At **Institution D**, Competition Led to the Creation of 4+1 programs

In 2005, the dean of the college of arts and science reviewed combined BA/MA programs at peer institutions and found that two-thirds of Institution D peers offered them, prompting department directors to launch over ten 4+1 programs.

Program approval processes differ among profiled institutions. At Institution C, engineering faculty approve the courses that students must complete to graduate with their BS and MA in five years. However, the approval process is more complex at Institution D, which requires several rounds of voting from department faculty and university committees. Contacts emphasize this rigorous approval process ensures the launch of high-quality programs.

4+1 Approval Process at **Institution D**

For Programs in the College of Arts and Sciences



4+1 Programs Offered at Profiled Institutions

Institution	4+1 and 3+2 Programs
Institution A¹	<ul style="list-style-type: none"> • BA or BS + Masters in Professional Writing (MAPW) • Bachelor's degree in Business Administration, Computer Science, Engineering, or Information Systems + MBA • BA or BS + MISM • BS in Computer Science + MS in Computer Science
Institution B²	<ul style="list-style-type: none"> • BS + MS in Biomedical Engineering • BSE + MS in Chemical and Bimolecular Engineering • BS + MS in Computational Science • BS + MS in Ecology and Evolutionary Biology • BS + MS in Neuroscience • BS + MS in Physics • BS + MS in Statistics • BS + MS Psychological Science • BS + MS Behavioral Health • BA + MA in Philosophy
Institution C^{3, 4}	<ul style="list-style-type: none"> • BSE + Master's of Engineering • BSE + Master of Science • BSE + Master of Engineering Management • BA or BS + Master of Forestry • BA or BS + Master of Environmental Management
Institution D⁵	<ul style="list-style-type: none"> • BA + MA in English • BA + MA in Creative Writing • BA + MA in French • BA + MA in History • BA + MA in Latin American Studies • BS + MS in Mathematics • BA + MA in Social Foundations of Health • BA + MA in Political Science • BA + MA in Psychology • BA or BS + MBA • BSE + MBA • BA in Computer Science + MA in Finance • BSE + Master's of Engineering • BA in Child Development + MSN • B.Mus. + M.Ed (Teacher Education) • B.Mus + MBA

At **Institution D**, students must enroll in an additional 30 credits to complete 4+1 programs.

1) Institution A website.
 2) Institution B website.
 3) Institution C website.
 4) Ibid.
 5) Institution D website.

Curriculum Development

At **Institution C** and **Institution D**, one course cannot count toward both an undergraduate and graduate credit simultaneously.

Most Profiled Institutions Do Not Create New Courses for 4+1 Programs

Most institutions do not create extra courses for 4+1 programs, and instead repurpose existing resources. Contacts indicate they seek to keep implementation costs at a minimum for 4+1 programs because they lose a year of revenue that a traditional master's student would pay. Students take courses from existing undergraduate and graduate courses to fulfill the necessary requirements for their program.

At **Institution A**, program administrators created more courses for the master's in professional writing (MAPW) to update an outdated curriculum, which was originally founded in the 1980s as a complement to the PhD program in rhetoric. The core content of the program, which includes courses in writing, rhetoric, and understanding the audience/end-user is the same today. However, faculty recognized the need to create and add new classes (e.g., information design, writing for social media) as technology and the digital age impacted the skill sets sought by students and employers in technical writing fields.

Tuition

Institutions Charge the Combined Cost of Undergraduate Tuition and Graduate Tuition for 4+1 Programs

Profiled institutions charge students in 4+1 programs undergraduate tuition for four years, and charge for the master's year per semester or per credit hour. Some contacts indicate that at their institutions graduate tuition is more expensive than undergraduate tuition after students receive financial aid. At **Institution D**, advisors encourage 4+1 students to take courses that count toward their master's senior year, as these courses are charged at the undergraduate rate even though they count as graduate courses.

Tuition Structures for 4+1 Programs

Option One: Charge per Semester

Institution	Program	Cost Per Year
Institution A	• Master's in Professional Writing	• \$39,140 ⁶
Institution C	• BSE + Master's of Engineering • BSE + Master of Science • BSE + Master of Engineering Management	• \$47,650 • \$47,590 • \$48,540

Institution C



6) Institution A website.

7) Institution C website.

Option 2: Charge per Credit Hour

Institution	Program	Cost per Credit Hour
Institution D	• BA/MA in French	• \$1,347

Institution D^{8,9}



8) Research interviews.
9) Institution D website.

3) Program Application Process and Student Demographics

Application Process

All 4+1 programs require that students have a minimum undergraduate GPA to apply; the requirement varies by program and institution.

All 4+1 Program Applications Require Personal Statements and Recommendation Letters

While the components of 4+1 applications vary according to institution and the program, all 4+1 program administrators require a statement of purpose and letters of recommendation. Other components program directors may require include GRE scores, a resume, prerequisite course completions, and supporting materials (i.e., writing samples for the MAPW at **Institution A**).

Application Components at Profiled Institutions¹⁰

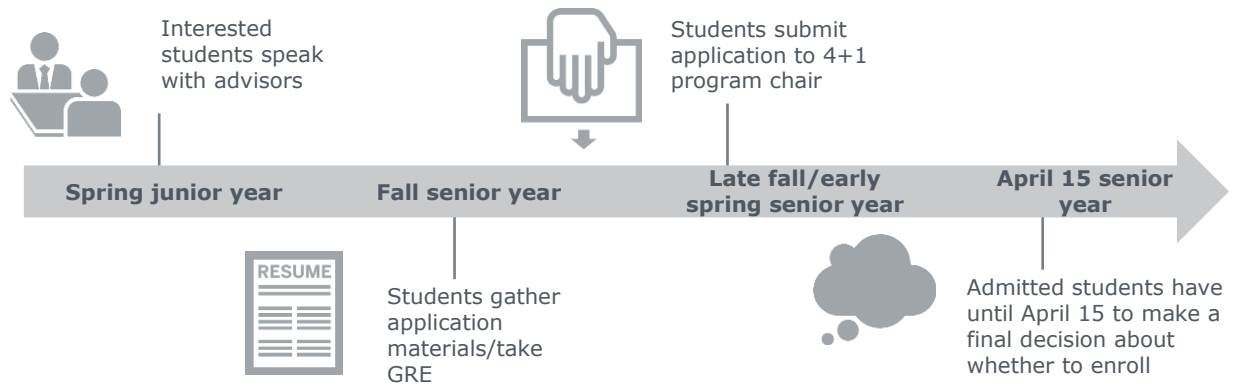
Institution	Program(s)	Personal Statement	Recommendation Letters	GRE Scores	Other Materials
Institution A	• MAPW	X	X		X
Institution B	• BS/MS Psychological Science • BS/MS Behavioral Health	X	X	X	
Institution C	• BSE + Master's of Engineering • BSE + Master of Science • BSE + Master of Engineering Management	X	X	X	
Institution D	• BA/MA French	X	X		

Advising Structures Do Not Change for 4+1 Students

During their undergraduate studies, undergraduate advisors assist students with the 4+1 program application process. When students transition to their graduate year they are assigned a new graduate advisor within the college or program.

10) Institution D offers nine 4+1 programs, all of which have different application processes and components; the BA/MA in French is used in this example, as in the section above with respect to tuition costs.

Application Timeline for 4+1 Programs



Flyers and posters, LCD screens, and announcement boards are the most popular forms of marketing for 4+1 programs. Program administrators also rely on website traffic to share information with prospective students. The most common information on university websites regarding 4+1 programs includes the following:

- Required application materials;
- Application timeline;
- Description of ideal 4+1 student candidate

The most high-touch form of advertising for 4+1 program is information sessions with first-year students during their orientation to campus. Program directors also host 4+1 program Q&A panels throughout the year.

Student Demographics

4+1 Students Are Typically More Affluent than Overall Undergraduate Student Population

Typically, administrators at graduate programs offer less financial aid and fewer scholarships. As a result, the student body of 4+1 programs reflects students from high socio-economic status. Although the MAPW program at **Institution A** offers a more generous tuition remission scholarship than most institutions (i.e., a scholarship that covers 40-45 percent of tuition¹¹) the nature of the program attracts few students who are not native English speakers.

11) Institution A website.

4) Outcomes of Profiled Programs

Measuring Student Success

Administrators at **Institution C** and **Institution D** do not disaggregate 4+1 student data when evaluating program success.

Survey Alumni to Determine Satisfaction and Completion Rates

Data regarding success of 4+1 program graduates is anecdotal; institutions measure student job placement upon graduation, five years after graduation, and 10 years after graduation. Administrators at **Institution A** also consider the following indicators to track MAPW alumni success:

- Number of students that complete a PhD (typically in rhetoric)
- Whether students are thought leaders in their field
- How many students are in managerial positions

Contacts at **Institution C** indicate that tracking graduate salaries is another strategy to evaluate student success.

Completion Rates Are Not Accurate Student Success Indicators

Contacts at all profiled institutions indicate that completion rates are very high for 4+1 programs (over 90 percent). However, administrators do not consider completion rates as indicators of success because these programs attract students who are driven, possess a clear vision and focus, and have made a significant financial commitment. Due to these factors, completion rates for 4+1 students higher than traditional undergraduate completion rates.

Program Assessment

Program Administrators Use Exit Interviews to Determine Student Success and Satisfaction Levels

Administrators conduct exit surveys to determine overall student satisfaction with 4+1 programs and to better understand how the programs meet students' academic and non-academic expectations. At **Institution A**, program directors responded to student feedback by adding a grants writing course to the MAPW curriculum to accommodate students interested in working for foundations. At **Institution C**, program administrators made the course registration less cumbersome based on student feedback.

Institution D and **Institution B** do not actively evaluate 4+1 programs (although students do evaluate individual faculty members at Institution D).

Sample Exit Interview/Survey Questions for Students:

	Strongly Agree	Agree	Slightly Agree	Disagree	Don't Know
I feel prepared to enter the workforce and gained the necessary skills to excel.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I would recommend this program to other potential students.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
This program met or exceeded my academic expectations.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I command a higher starting salary.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

5) Research Methodology

Project Challenge

Leadership at a member institution approached the Forum with the following questions:

- What 4+1 and 3+2 programs do other private AAU members currently offer?
- Which departments or colleges frequently offer 4+1 and 3+2 programs?
- From where does the impetus for program creation come?
- What is the approval process like for new programs, and who is involved in this?
- How is curriculum developed and by whom? To what extent do programs build on existing courses and programs?
- What financial investments do institutions make during program creation? What is included in these costs, and which expenditures are most costly?
- How do contacts determine tuition levels for 4+1 and 3+2 programs?
- How is financial aid awarded to students?
- What is the application process for students interested in 4+1 and 3+2 programs and when can students apply to the graduate program?
- How do the demographics of students who apply to 4+1 and 3+2 programs compare to demographics of the overall institution?
- What are the advising structures for 4+1 and 3+2 students, and how are they specialized to serve students in these programs?
- What does program-specific marketing look like?
- How do program administrators measure program success and outcomes?
- Are students given the opportunity to assess the program upon completion? If so how is this evaluation conducted, and how is feedback integrated?
- What are the completion rates for 4+1 students?

Project Sources

The Forum consulted the following sources for this report:

- EAB's internal and online research libraries (eab.com)
- National Center for Education Statistics (NCES) (<http://nces.ed.gov/>)
- Association of American Universities (<https://www.aau.edu/about/article.aspx?id=5474>)
- Institutional websites:
 - Boston University:
 - <http://www.bu.edu/sph/students/resources/courses-and-academic-resources/guides/2014-2015-concentrators-guides/dual-degree-4-1-programs/>
 - Cornell University:
 - <http://www.human.cornell.edu/dea/graduate/five.cfm>
 - Emory University:

- http://catalog.college.emory.edu/department-program/four-one-programs/four_one_programs_details.html#envs.
- Institution A website
- Institution B website
- Institution C website
- Institution D website

Research Parameters

The Forum interviewed 4+1 program deans at the following institutions:

A Guide to Institutions Profiled in this Brief

Institution	Location	Approximate Institutional Enrollment (Undergraduate/Total)	Classification
Boston University*	Northeast	18,000 / 33,300	Research universities
Cornell University*	Northeast	14,900 / 23,000	Research universities
Emory University*	South	6,900 / 14,200	Research universities
Institution A	Northeast	5,900 / 11,300	Research universities
Institution B	South	8,300 / 13,000	Research universities
Institution C	Southeast	6,600 / 14,900	Research universities
Institution D	South	6,800 / 12,800	Research universities

*Institutions profiled via secondary research.

Appendix A: 4+1 and 3+2 Programs at Select Private AAU Institutions

Institution	Program
Institution A¹²	<ul style="list-style-type: none"> • BA or BS + Masters in Professional Writing (MAPW) • Bachelor’s degree in Business Administration, Computer Science, Engineering, or Information Systems + MBA • BA or BS + MISM • BS in Computer Science + MS in Computer Science
Institution B¹³	<ul style="list-style-type: none"> • BS + MS in Biomedical Engineering • BSE + MS in Chemical and Bimolecular Engineering • BS + MS in Computational Science • BS + MS in Ecology and Evolutionary Biology • BS + MS in Neuroscience • BS + MS in Physics • BS + MS in Statistics • BS + MS Psychological Science • BS + MS Behavioral Health • BA + MA in Philosophy
Institution C^{14,15}	<ul style="list-style-type: none"> • BSE + Master’s of Engineering • BSE + Master of Science • BSE + Master of Engineering Management • BA or BS + Master of Forestry • BA or BS + Master of Environmental Management
Institution D¹⁶	<ul style="list-style-type: none"> • BA + MA in English • BA + MA in Creative Writing • BA + MA in French • BA + MA in History • BA + MA in Latin American Studies • BS + MS in Mathematics • BA + MA in Social Foundations of Health • BA + MA in Political Science • BA + MA in Psychology • BA or BS + MBA • BSE + MBA • BA in Computer Science + MA in Finance • BE + Master’s of Engineering • BA in Child Development + MSN • B.Mus. + M.Ed (Teacher Education) • B.Mus + MBA

12) Institution A website.

13) Institution B website.

14) Institution C website.

15) Ibid.

16) Institution D website.

Institution	Program
Boston University ¹⁷	<ul style="list-style-type: none"> • BA or BS + MPH
Cornell University ¹⁸	<ul style="list-style-type: none"> • BA + MA in Design • BA + MS in Human Environment Relations
Emory University ¹⁹	<ul style="list-style-type: none"> • BS + MS in Cancer Biology and Translational Oncology • BS + MPH 5-Year Environmental Sciences (ENVS) and Environmental Health (EH) Program • BA + MSPH Program in Biostatistics • BA + MA Program in English • BA or BS + Juris Master • BA + MA Program in Film and Media Studies • BS + MS Program in Environmental Sciences

17) "Dual Degree and 4+1 Programs," *Boston University School of Public Health*, accessed August 27th, 2015, <http://www.bu.edu/sph/students/resources/courses-and-academic-resources/guides/2014-2015-concentrators-guides/dual-degree-4-1-programs/>

18) "Design and Environmental Analysis," *Cornell University College of Human Ecology*, accessed August 27th, 2015, <http://www.human.cornell.edu/dea/graduate/five.cfm>.

19) "Current 4+1 Programs," *Emory University College of Arts and Sciences*, accessed August 27th, 2015, http://catalog.college.emory.edu/department-program/four-one-programs/four_one_programs_details.html#envs.